New Records and Distributional Notes on Maryland Pteridophytes

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During the course of a critical appraisal of the state list of rare and endangered vascular plants of Maryland (Broome et al., 1979), we discovered several interesting range extensions for the pteridophytes. A full treatment of the ferns and fern-allies of Maryland, Delaware, and the District of Columbia was prepared by Reed (1953), who provided dot distribution maps for all of the taxa. These two reports have enabled us to determine gaps in distribution, and our extensive field and herbarium studies have turned up county records for twelve Maryland species. We hope that this information will be of use to those interested in the ferns of the eastern United States in general.

Lycopodium clavatum L.—In our experience, the Running Club-moss in Maryland is most frequent in moist areas of the mountains of Garrett County. If is far less frequent in the piedmont and coastal plain regions of the state. This new locality is at the border between the latter two phytogeographic provinces.

Anne Arundel Co.: 2.9 mi SW of Odenton post office, floodplain of the Little Patuxent River. 25 Oct 1970, *D. Bystrak s. n.* (MARY).

Lycopodium tristachyum Pursh—The infrequent Ground Cedar is historically known from Cecil, Garrett, Prince George's, Wicomico, and Worcester Counties in Maryland (Reed, 1953), but few current localities are known. Our new record is from an old collection, and the current status of the species in the state should be examined.

Montgomery Co.: Cropley Falls, 9 Dec 1950, *J. H. Penson s. n.* (MARY).

Selaginella rupestris (L.) Spring—The Rock Spike-moss in Maryland is known from Allegany, Baltimore, Frederick, and Montgomery Counties, with a possible site in Garrett County (Reed, 1953). It seems to be locally frequent on the slightly calcareous shale barrens of Allegany and Washington Counties, but is quite infrequent overall in the state. The species is declining in Massachusetts (Coddington & Field, 1978), is vulnerable and declining in New Jersey (Snyder & Vivian, 1981), and has apparently become extinct in Delaware (Tucker et al., 1979). It should probably be considered for inclusion in the Maryland list of threatened and endangered species.

Washington Co.: Shale barren ledges, High Germany Road ca. 0.3 mi N of Sideling Hill Creek, 2 May 1981, *S. R. Hill & R. E. Riefner 9931* (MARY, VT); Shale barren at E side of Sideling Hill Creek at Rte. 40, 2 May 1981, *S. R. Hill & R. E. Riefner 9949* (MARY, VT).

Ophioglossum vulgatum L.—This new locality for the Adder's-tongue is a western range extension of ca. 50 miles within Maryland. It also seems significant in that most known populations of the species occur on the coastal plain, rather than in the ridge and valley province of the northwestern portion of the state (Reed, 1953).

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Washington Co.: Along Rabble Run, Catholic Church Road near Forsythe, 13 June 1981, *S. R. Hill & R. E. Riefner 10325* (MARY, NY, TAES, VT).

Osmunda claytoniana L.—The Interrupted Fern is the least frequent of the three *Osmunda* species in Maryland and is nearly always restricted to the piedmont and mountain regions of the state (Reed, 1953). This new record places the species at the edge of the coastal plain, a region where it is rare.

Anne Arundel Co.: 1.1 mi S of Odenton post office, hillside, 7 June 1970, *D. Bystrak s. n.* (MARY).

Adiantum pedatum L.—The Northern Maidenhair is frequent in the piedmont and mountain areas of Maryland, but is rare on the coastal plain. If the label data on the St. Mary's County specimens are accurate (the locality is imprecise), this population would be the southernmost known in the state.

Prince George's Co.: Vicinity of College Park, 14 July 1949, *W. S. Glidden 22* (MARY); Paint Branch Creek, College Park, Oct 1953, *R. E. Zarza s. n.* (MARY). St. Mary's Co.: Shaded woods near Patuxent River, 21 May 1964, *S. A. Riley s. n.* (MARY).

Asplenium ruta-muraria var. cryptolepis (Fern.) Wherry—The American Wall-rue Spleenwort was included on the Maryland list of threatened vascular plants (Broome et al., 1979) and was given undetermined (UNDT) status. We have located ten healthy populations on the calcareous bluffs along the Potomac River from Allegany to Frederick Counties and feel that while it is local, it is not at present endangered in the state. Reed (1953) recorded it from Washington and Frederick Counties only.

Allegany Co.: Limestone crevices along Western Maryland Railroad at Pinto, 10 May 1981, *R. E. Riefner 81-78* (MARY).

Cheilanthes lanosa D. C. Eaton—The Hairy Lip Fern is occasional on rock outcrops on the piedmont and towards the mountains of western Maryland. The new county record is adjacent to known localities in Baltimore County. The fern has not yet been found in Garrett County, but is to be expected there.

Howard Co.: Rock ledges of overlook at Patapsco State Park along Patapsco River near Rte. 40 bridge, 19 Nov 1981, *R. E. Riefner 81-850* (MARY).

Dryopteris goldiana (Hook.) Gray—Goldie's Fern has been frequently confused with *Dryopteris celsa* (Palmer) Small in several fern treatments (e.g., Reed, 1953), and these have combined records for the two. Others recognize *D. celsa* as *D. goldiana* subsp. *celsa* Palmer. Studies on the cytology of the species complex involved (Montgomery, 1975; Walker, 1962) demonstrate that the two species are distinct. In addition, *D. celsa* is a coastal plain species, whereas *D. goldiana* is a mountain species. The specimen cited was growing in a rich, moist, beech woodland in the mountains. We have not examined all of the voucher specimens involved in Reed's treatment, but those from Montgomery, Garrett, and Baltimore Counties that we have seen (at US) seem to be *D. goldiana*, although the specimen from Worcester Co. cited by Broome et al. (1979) is probably *D. celsa*, which is less frequent in the state.

Frederick Co.: Slopes near Owens Creek, Foxville Road, Catoctin Mountain National Park near Thurmont, 4 Oct 1981, *S. R. Hill & A. D. Cress 10820* (MARY, NY, VT).

Matteuccia struthiopteris (L.) Todaro—The Ostrich Fern is an endangered species in Virginia known from few locations (Porter, 1979), but its status in Maryland was considered to be undetermined by Broome et al. (1979). We have located five populations extant in the state in Allegany, Baltimore, Harford, and Washington Counties, and the plant is historically known from Carroll, Howard, Montgomery, and Prince George's Counties as well (Reed, 1953). We are convinced that the Washington County population is indigenous despite Reed's (1953) suggestion that the western and southwestern populations are escaped from cultivation. The Roundtop population was associated with several other infrequent plants of alkaline alluvial soils, such as *Gleditsia triacanthos, Ptelea trifoliata,* and *Chasmanthium latifolium*.

Washington Co.: Rich woods and bottomland along the Potomac River just W of Roundtop Mountain, 7 June 1981, *R. E. Riefner 81-138* (MARY).

Woodsia ilvensis (L.) R. Br.—The Rusty Cliff Fern is very rare in Maryland, having a preference for exposed shale cliffs associated with shale barrens. At the Washington County locality the shale is calcareous, although Reed (1953) remarks on the non-calcareous preference of the species. It was growing in full sun with *Phlox subulata, Arenaria stricta, Cystopteris fragilis, Comandra umbellata,* and *Tephrosia virginiana*. The only other population that we have seen is at the shale barren at Town Creek (also calcareous shale) in Allegany County, where only a few plants survive (Riefner, 1981). We have discovered one other old collection from Allegany County (Flintstone, 3 June 1928, *N. C. Knappa s. n.*, Patuxent Res. Refuge Herb.).

Washington Co.: Shale cliff along Sideling Hill Creek, High Germany Road, 2 May 1981, *R. E. Riefner & S. R. Hill 81-55* (MARY).

Azolla caroliniana Willd.—The Mosquito Fern is said to be very frequent in watercress beds near the Monocacy River by Reed (1953). We have seen only the specimen from Prince George's County and a specimen from Kenilworth Gardens, Washington, DC (*W. Preston, Jr. s. n.*, MARY). These seem to have been chance introductions and probably did not persist. The Mosquito Fern is undoubtedly a frequent "hitchhiker" on waterfowl migrating north in the spring from warmer regions, where the plant is frequent in swamps and on still-water ponds. The plant may also be introduced from aquaria.

Prince George's Co.: Golf course pond, 14000 Old Marlboro Pike, Upper Marlboro, 15 July 1976, *K. Hummel s. n.* (MARY).

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REVIEW

"ILLUSTRATIONS OF PTERIDOPHYTES OF JAPAN," volume 2, S. Kurata and T. Nakaike, eds. x + 648 pp. + map. 1981. University of Tokyo Press, yen 10,000 (about $47).—This is the latest of a great array of excellent plant books produced in Japan for the large portion of the population seriously interested in botany. On the glossy paper of this lavish and heavy volume 100 Japanese ferns (from a total of nearly 800) are presented, each with a black and white photo of its appearance in the wild, a line drawing with insets of important details, and a dot map showing precise distribution in Japan. A separate section in the back has a photomicrograph of a spore of each species.

Almost everything is in Japanese, except for botanical names and numbers, so the value of the book for the non-reader of Japanese is in the illustrations. The sharp-detail photos put you inside the forests of Japan looking at moss-covered and lichen-covered trunks, and at boulders and embankments, and the ferns are right there looking just as they really do. The line drawings are not cosmeticized or stylized—the occasional small insect bite or other imperfection is faithfully rendered. What you see is what you get.

This volume deals mainly with *Asplenium* and the genera allied to *Polypodium* and *Grammitis*. Two new combinations are made, presumably due to the reinterpretation of a type specimen by Dr. Toshiyuki Nakaike: the fern usually known as *Neocheiropteris subhastata* (Bak.) Tagawa is renamed *N. buergeriana* (Miq.) Nakaike, and the fern that was *Microsorium buergerianum* (Miq.) Ching is now *M. brachylepis* (Bak.) Nakaike.

My only criticism is that about half the book is taken up by lists of localities that to a large extent duplicate infomation already available from the fine dot maps.—*M. G. Price, Herbarium, University of Michigan, Ann Arbor, MI 48109.*